



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2021-0794; Project Identifier AD-2021-00400-T; Amendment 39-21869; AD 2021-26-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 747-400, -400D, and -400F series airplanes. This AD was prompted by reports of burned Boeing Material Specification (BMS) 8-39 urethane foam, and a report from the airplane manufacturer that airplanes were assembled with seals throughout various areas of the airplane (including flight deck and cargo compartments) made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age. This AD requires replacing the system tube/wire seals made of BMS 8-39 urethane foam in certain areas of the airplane. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600

Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0794.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0794; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Julie Linn, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3684; email: [julie.linn@faa.gov](mailto:julie.linn@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 747-400, -400D, and -400F series airplanes. The NPRM published in the *Federal Register* on October 14, 2021 (86 FR 57081). The NPRM was prompted by reports of burned BMS 8-39 urethane foam, and a report from the airplane manufacturer that airplanes were assembled with seals throughout various areas of the airplane (including

flight deck and cargo compartments) made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age. In the NPRM, the FAA proposed to require replacing the system tube/wire seals made of BMS 8-39 urethane foam in certain areas of the airplane. The FAA is issuing this AD to prevent failure of the urethane seals to maintain sufficient Halon concentrations in the cargo compartments to extinguish or contain fire or smoke, and to prevent penetration of fire or smoke in areas of the airplane that are difficult to access for fire and smoke detection or suppression.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received comments from Boeing, the Air Line Pilots Association, International (ALPA), and two individuals, who supported the NPRM without change.

### **Conclusion**

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

## **Related Service Information under 1 CFR Part 51**

The FAA reviewed Boeing Special Attention Service Bulletin 747-25-3381, Revision 3, dated February 19, 2021. This service information specifies procedures for replacing BMS 8-39 urethane foam seals with BMS 1-68 silicone foam rubber seals (including doing a general visual inspection of the foam for any tube or wire penetrations and sealing any penetrations that go through the insulation blankets). This service information adds the work instructions for Group 11, Configuration 2; Group 13 and 14, Configuration 4; and Group 16, 17, and 19, Configuration 5 airplanes.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

### **Costs of Compliance**

The FAA estimates that this AD affects 131 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Replacement (including GVI)	Up to 32 work-hours X \$85 per hour = Up to \$2,720	\$*	Up to \$2,720	Up to \$356,320

\*The FAA has received no definitive data on which to base the parts cost estimates for this AD.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2021-26-10 The Boeing Company:** Amendment 39-21869; Docket No. FAA-2021-0794; Project Identifier AD-2021-00400-T.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to The Boeing Company Model 747-400, -400D, and -400F series airplanes, certificated in any category, identified as Group 11, Configuration 2;

Group 13 and 14, Configuration 4; and Group 16, 17, and 19, Configuration 5, in Boeing Special Attention Service Bulletin 747-25-3381, Revision 3, dated February 19, 2021.

**(d) Subject**

Air Transport Association (ATA) of America Code 25, Equipment/Furnishings.

**(e) Unsafe Condition**

This AD was prompted by reports of burned Boeing Material Specification (BMS) 8-39 urethane foam, and a report from the airplane manufacturer that airplanes were assembled with seals throughout various areas of the airplane (including flight deck and cargo compartments) made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age. The FAA is issuing this AD to prevent failure of the urethane seals to maintain sufficient Halon concentrations in the cargo compartments to extinguish or contain fire or smoke, and to prevent penetration of fire or smoke in areas of the airplane that are difficult to access for fire and smoke detection or suppression.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) BMS 8-39 Urethane Foam Seal Replacements**

Within 72 months after the effective date of this AD: Replace the BMS 8-39 urethane foam seals in the forward cargo compartment system tube/wire (including doing a general visual inspection of the foam for any tube or wire penetrations and sealing any penetrations that go through the insulation blankets) with BMS 1-68 silicone foam rubber seals, as applicable, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-25-3381, Revision 3, dated February 19, 2021.

**(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In

accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. Information may be emailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(i) Related Information**

For more information about this AD, contact Julie Linn, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3684; email: julie.linn@faa.gov.

**(j) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Special Attention Service Bulletin 747-25-3381, Revision 3, dated February 19, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on December 9, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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